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MEMO

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DEPARTMENT OF ECOLOGY
NORTHWEST REGION

December 11, 1984

TO: FILES

FROM: Tom Hubbard

SUBJECT: Duwamish Shipyards, 5658 West Marginal Way SW

On Thursday, November 15, 1984, Tom Hubbard, Jim Shahan and Denise Healy of the Metro site visit team met with Don Meeberg of Duwamish Shipyards to discuss their operations and their possible impact on the river. First we discussed the results of Metro's sampling of river sediment underneath Duwamish Shipyards' Dry Dock 2 in April of 1984 (attached). The concentrations of heavy metals were comparable to those found around Todd, Lockheed and Marine Power and Equipment. We then discussed their sandblast material and its disposal (quantity and quality). Meeberg did not have answers to these questions, but he said he would check on them as well as the number of times the drydocks are raised and lowered per year.

Duwamish Shipyard does not have overspray controls, but they do use airless guns to limit the overspray. They have tried water curtains, but they were ineffective. Oil is stored in underground tanks and solvents are in covered areas. Bilge water is pumped into drums and recycled.

The compressors at Duwamish Shipyard are on a closed system with no discharge to the storm or sanitary system. They do not have a steam cleaning facility on site. Any steam cleaning is sent out. They do have a small caustic tank. Meeberg was unaware of any storm drainage plans but he would check on them, too. They have no EPA approved Spill Control or Prevention Plan.

The site was a farm before Duwamish Shipyards began in 1941.

On Wednesday November 28, Tom Hubbard and Jim Shahan toured the facility with Don Meeberg. He did supply us with a site plan (attached) and answered several of the questions from the pre-site conference. They buy 780 tons of "Kleenblast" per year (November 1983-November 1984) (A fact sheet is attached.). This material is from Grand Forks, BC. It is brought in by truck and stored in a covered silo. Pneumatic hoses deliver the blast material to the point of use on the drydocks. The waste material is removed by front loaders and shovel and broom before lowering the drydock. Meeberg estimated there is a 75 percent to 95 percent recovery of spent blast material. In 1983, the two floating drydocks were raised and lowered 59 times and the marine gangway was used 12 times. In 1982, they had a total of 85 raisings. The waste blast material is stored on the bank of the river and is removed about once a year by a man named "Anderson." It is dumped "near Longacres in Renton." The quantity of blast material removed is difficult to estimate because it is hauled off on weekends and Duwamish Shipyard is unaware of the quantity. They are billed by manhours and not by volume, but Meeberg will check with "Anderson" to determine the approximate quantity of blast material hauled away.

Because of their location in the river, the freshwater in the surface water of the Duwamish controls the growth of marine borers and they do not have to treat the drydock with anti-fouling agents.

Much of the paint used at Duwamish Shipyard is amine cured epoxy, but the most common bottom coating is DeVoe Formula 216 which is 40 percent cuprous oxide (CuO). Much of their paint has organotin complexes as well as copper.

We toured the site starting at the westend near West Marginal Way SW. A creek which originates in on the West Seattle ridge runs through a culvert along the railroad tracks and then discharges into an underground system which also functions as Duwamish Shipyards' storm drainage system.

Behind the warehouse, there is an oil recycling area. Bilge water is pumped out of ships and barges into 55-gallon drums and then transported to an old railroad tank car where it is allowed to separate. The oil is sold to recyclers, but the water is released onto the ground through a valve welded onto the bottom of the tank. The tank is within 10 yards of General Construction's slipway immediately north of Duwamish Shipyard. Meeberg was warned that discharge to the ground or groundwater requires a state discharge permit. (I later consulted Barb Smith of WDOE and she recommended connection to the sanitary sewer which would require a Metro Industrial Waste Permit.) The empty and full drums as well as the tank are in an unpaved, unbermed area.

The copper shop in the 1973 site plan has been removed. There is a small caustic tank between the diesel and machine shops. Metro Industrial Waste has sampled similar tanks in other industries and found high levels of lead in the caustic water and sludge which accumulates in the bottom. Although this tank does not drain or discharge to either storm or sanitary drains, if it was to tip over or leak, the water and sludge would drain to the river. A small berm would prevent this. Most of the westend of the property is parking and warehouse. Southeast of the office is the small parts sand blasting facility. Although there is a roof on this facility, there are no walls and a large area in front of and on both sides covered with several inches of spent sand blasting material and had also bown over much of the yard. They have tried curtains to contain this waste but they were ineffective. Clouds of dust could be seen around this facility while it was in operation. Meeberg is concerned about the health aspects of breathing this dust. Just east of the small parts blast facility is the solvent and paint storage area which is covered and has provisions for collection of any spillage. The paint shed is also in this area. It is covered but the front is open to the rest of the yard.

The sand blast material is stored in a covered silo on the dock between drydocks 1 and 2. Spent sand is stored on the far southeastern corner of the property on the bank of the river. There are some old pilings laying on their sides to separate the spent sand from the river, but some sand could be seen spilling over the bank. The area is approximately 15' x 20' and Meeberg said that a years' accumulation of spent sand filled the area about 2' deep. A rough estimate of the quantity does not appear like 780 tons of material was recovered. Better berming between the river and blast material and covering with plastic tarps would control direct escape and any leaching from rain percolating through the sand blast waste.

Both drydocks and the marine way were very clean when we toured the facility. Meeberg attributed some of this to the lack of business. Drydock 1 appeared mor difficult to clean because of the height and spacing of supports on the bottom of the drydock.

Recommendations:

1. Upgrade oil recycling area. This area should be paved and bermed. Wastewater from the oil separator should be connected to the sanitary sewer or else hauled away by a tank pumping firm. A sample of this water should be analyzed to determine what has been discharged to the ground over the past 20 or 30 years.

Duwamish - cut up - get rid of it

2. Upgrade waste sand holding area. Berming and covering of this area with a tarp would prevent direct discharge and leaching by rainwater. The waste sand blast material should be sampled and analyzed for heavy metals.

*not a clean
in my Duwamish
2/11/86
Koch*

3. Determination of waste sand disposal. The quantity of sand disposed on annual basis needs to be determined.

4. Control of wast sand from small parts blasting curtains, a bag house or other methods are recommended to control the fugitive dust from the small parts blasting facility from blowing over the east end of the yard and into stormdrains.

5. Storm drain sampling. Sediment in the storm drain beneath Duwamish Shipyard should be sampled. A grab sample from the manhole adjacent to the winch house should be sufficient compared to a sample taken from the culvert before it enters Duwamish Shipyard.

*done
by Metro
Meeberg
2-11-86
Koch*

6. Spill Prevention Control and Countermeasure Plan under title 40 Code of Federal Regulations, Part 112, Duwamish Shipyard should develop a SPCC plan. Any facility above ground storage of 660 gallons or more is required to have such a plan. The full text of the regulations can be found in the Federal Register, Volume 38, No. 237, December 11, 1973.

7. The area around the caustic tank should be bermed to prevent spillage or leakage from reaching the river.

On December 6, 1984, Tom Hubbard and Jim Shahan held a post-site visit conference with Don Meeberg. He agreed in principle to the Metro recommendations and promised to respond in writing within two weeks. He plans to pave and berm the oil recycling/drum storage area and will have the bilge water hauled away for treatment. Because he will no longer use ground disposal for the water fraction, he wondered if a sample was necessary. He will upgrade the sand storage area. He will contact "Anderson" about the quantity of sand blast material disposal. He will explore options for controlling dust from the small parts area. He agreed to sampling of storm drain sediment and blast material. He will contact EPA regarding an SPCC plan.

1984 METRO internal Memo

- oil stored in UST
- bilge water recycled
- "Kleenblast" - most is recovered after use but some gets into river
- Paint DeVoe Formula 216 - 40% cuprous oxide
amine cured epoxy - organotin compounds + copper
- Creek at site in culvert next to RR tracks goes into underground system which functions as storm drain system

1984

- Bilge water stored in drums then old RR ^{tank} car used for oil/water separation. Oil is recycled but water released into ground. Tank is w/ 10 yards of slipway in river. Area is unpaved, unbermed.
- Copper shop existed on site before 1984 (don't know when removed nor use discussed)
- Caustic tank between diesel + machine shops. Similar tanks at other facilities contains high levels of Pb - not bermed, no drains out of it
- SE of office is open but roofed area for sandblasting grit - generates clouds of dust - curtains not effective

Solvent + paint storage area has spill prevention plans
but area open to weather

Sand blast material stored in silo. Spent material stored
SE corner of property on river bank. Not covered +
blowing, inadequate